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10/699,906	11/03/2003	Jason Harold Culler	200310793-1	4393

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EXAMINER	
NGUYEN, MINH T	
ART UNIT	**PAPER NUMBER**
2816	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/699,906	CULLER, JASON HAROLD	
	Examiner	Art Unit	
	Minh Nguyen	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,14,17-25,27,30 and 31* is/are rejected.

7)☒ Claim(s) *13,15,16,26,28 and 29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/3/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: a brief description of Fig. 8 in the Brief Description of the Drawing section is missing. Appropriate correction is required.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification does not adequately point out the structure "means for controlling oscillating means to provide the internal clock signal at a frequency based on the comparison of the external reference signal and the internal clock signal" recited in claim 18. In other words, it is unclear which corresponding structure shown in the drawings performs the recited means plus function.

Claim Objections

3. Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claim does not adding any further limitation. The recited oscillating means is already recited on line 4 of claim 18. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3, 5-11, 18-23 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, the claim is rejected as being incomplete because the recited comparison action is not supported by any structural elements of the claim. In other words, none of the recited elements performs the function which is comparing of an indication of the frequency for the synchronization signal and a corresponding indication of the frequency for the clock signal so that the oscillator can be based on to adjust the frequency of the clock signal.

As per claims 2-3, 5-11, these claims are rejected for the same reason noted in claim 1.

As per claim 11, the claim is indefinite because the dependency status is ambiguous. If the claim is seen as an independent claim, the format for writing causes confusion in determining fee payment (the evidence is that the applicant is paying dependent claim fee). If the claim is the dependent claim, it fails to comply with the requirement under 112, 4th paragraph since it is not further limit the subject matter of claim 1. See MPEP 2173.05(f), last sentence, i.e., "*where the format of making reference to limitations recited in another claim results in confusion, then a rejection would be proper under 35 U.S.C. 112, second paragraph*". The rejection can be overcome without any change to the claim by clarifying the claim is independent claim and *paying the independent fee*.

As per claim 18, this claim is rejected for the reason discussed in paragraph 2, i.e., it is unclear which corresponding structure shown in the drawings performs the recited means for controlling.

As per claim 19, the term "oscillating means" lacks clear antecedent basis, i.e., see line 4 of claim 18.

As per claims 19-23, these claims are further rejected because of the indefiniteness of independent claim 18.

As per claim 31, the same problem exists as discussed in claim 11.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4, 7-8, 10-12, 14, 17-20, 23-25, 27 and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,459,435, issued to Taki.

As per claim 1, Taki discloses a system (Fig. 1), comprising:

an input that receives a synchronization signal having a frequency (the input which receives the reference clock signal F); and

an oscillator (VCO 7) that provides a clock signal having a frequency (the clock signal F'), the oscillator adjusts the frequency of the clock signal based on a comparison of an indication of the frequency for the synchronization signal and a corresponding indication of the

frequency for the clock signal (as shown, the frequency of the synchronization signal F is compared with the frequency of the clock signal F' by the comparison unit 4 and the frequency of the clock signal F' is adjusted accordingly, see operating description in column 4, especially lines 55-66).

As per claim 2, Take further discloses:

a first sampling system (the circuits 1 and 3, sampled by the sampling signal T, column 4, lines 14-15) that provides a digital indication of the frequency for the synchronization signal (the digital indication FAVE); and

a second sampling system (circuit 2, sampled by the sampling signal T, column 4, lines 14-15) that provides a digital indication of the frequency for the clock signal (the digital indication F'D), the oscillator adjusting the clock signal based on a comparison between the indication of frequency for the clock signal and the indication of the frequency for the synchronization signal (column 4, lines 63-66).

As per claim 4, the recited comparator reads on the comparison unit 4. The recited function is discussed in claim 1.

As per claim 7, the recited update control reads on the circuit which generate the control signal TA (Fig. 2), i.e., the control signal TA sets a rate for updating the latches 1B and 2B which in turns updating the frequency of the clock signal.

As per claim 8, the recited limitation which is the operating characteristics of an integrated circuit chip comprising the system is treated as an intended use of the system because the integrated circuit chip is not further limit the claimed subject matter of claim 1. Accordingly, no patentable weight is given to the recited intended use.

As per claims 10-11, these claims are rejected for the same reason noted in claim 8.

As per claim 12, this claim is rejected for the same reasons noted in claims 1, 2 and 4. Further, the recited controller reads on digital/analog unit 6.

As per claim 14, as shown, FAVE and F'D are digital values. The recited limitation on the last two lines is merely the function of the comparator 4.

As per claim 17, this claim is rejected for the same reason noted in claim 7.

As per claim 18, the recited means for comparing reads on comparison unit 4, the recited means for controlling oscillating means (VCO 7) reads on the circuits 5 and 6 shown in Fig. 1 of Taki.

As per claim 19, the recited oscillating means reads on the VCO 7.

As per claim 20, this claim is rejected for the same reason noted in claim 2.

As per claim 23, this claim is rejected for the same reason noted in claim 7.

As per claim 24, this claim is merely a method to operate a system having the structure discussed in claim 1. Since Taki teaches the system, he inherently teaches the recited method.

As per claim 25, this claim is rejected for the same reason noted in claim 2.

As per claim 27, the recited control signal is the signal from the converter unit 6 to the VCO 7.

As per claim 30, this claim is rejected for the same reason noted in claim 7.

As per claim 31, the circuit to perform the method of claim 24 is discussed in claim 1.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,459,435, issued to Taki.

Taki discloses a system having structure discussed in claim 2 herein above wherein the sampling rate is T. He further explicitly discloses the relationship between the sampling rate T and the capability of removing the noise based on the sampling rate which is 1/M*T (column 5, lines 60-65). In other words, increasing or decreasing the sampling rate will increase or decrease the ability to remove certain noise components.

He does not explicitly disclose the sampling rate is at least four times that of the synchronization signal as called for in the claim.

However, it has been held by the court that when general condition is met, it is not inventive by merely adjusting the parameters in a circuit to achieve an optimum result for a certain condition.

In this instant case, Taki teaches the sampling rate can be adjusted to remove certain noise components. It would have been obvious to one skilled in the art at the time of the invention was made to adjust the sampling rate T in the Taki's system to have a rate that is at least four times that of the synchronization signal. The motivation would be to meet the requirement of a certain application which requires the removing of certain noise components so that the Taki's system can be used in such an application.

Allowable Subject Matter

7. Claims 13, 15, 16, 26, 28 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 13 is allowable because the prior art of record fails to disclose or suggest the inclusion of delay network in at least one of the first and second sampling systems.

Claim 15 is allowable because the prior art of record fails to disclose or suggest the inclusion of a phase detector and a phase adjuster in the system.

Claim 16 is allowable because the prior art of record fails to disclose or suggest the inclusion of an insertion loss compensator in the system.

Claims 26, 28 and 29 are allowable for the same reasons noted in claims 13, 15 and 16, respectively.

8. Claims 5, 6, 9 and 21-22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 5, 6 and 9 are allowable for the same reasons noted in claims 15, 16 and 13, respectively.

Claims 21 and 22 are allowable for the same reasons noted in claims 15 and 16, respectively.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Nguyen whose telephone number is **571-272-1748**. The examiner can normally be reached on Monday, Tuesday, Thursday, Friday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8/18/05

Minh Nguyen
Primary Examiner
Art Unit 2816